

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of:)	
)	
IP-Enabled Services)	WC Docket No. 04-36
)	

**COMMENTS OF
THE ENTERPRISE COMMUNICATIONS ASSOCIATION**

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SUMMARY

The Enterprise Communications Association ("ECA") is a leading trade association promoting the growth of markets and effective sales channels for converged communications solutions deployed by enterprise businesses. ECA's membership base includes manufacturers, distributors, network service providers, sales channel companies, systems integrators, applications developers, and consultants. As such, ECA provides a unique perspective on the issues presented in this proceeding.

In this proceeding, the Commission seeks comment on the appropriate regulatory scheme for voice over Internet Protocol ("VoIP") and other Internet Protocol ("IP") services. As the Commission observes in the *NPRM*, the changes wrought by the rise of IP-enabled communications services promise to be revolutionary. Thus, the task of the Commission in this proceeding is critical to the public interest.

ECA strongly believes that the key focus of the Commission must be on ensuring equal access to network facilities. If IP providers cannot obtain access to the network facilities needed to deliver services to their customers, all of the Commission's efforts to fashion a regulatory environment that otherwise encourages the development of IP services will be moot. The incumbent local exchange carriers ("ILECs") remain the dominant providers of access facilities in most markets. ECA strongly urges the Commission to maintain – and indeed to expand where necessary – the regulatory protections ensuring access to ILEC facilities in general, and broadband loops in particular.

ECA recommends that the Commission impose certain regulatory requirements on the ILECs to minimize the potential for anticompetitive behavior in the market for IP-enabled equipment and services, and to level the playing field for competitive providers. At a minimum,

the ILECs should be required to adopt Comparably Efficient Interconnection ("CEI") plans for all IP-enabled services, regardless of the classification of those services. The ILECs' CEI plans should be required to address all nine (9) parameters that the ILECs are presently required to address in their CEI plans for other telecommunications services. The ILECs should be required to delay their initiation of service until 30 days after their CEI plans for IP-enabled services are posted to their web sites.

Also, the Commission should require ILECs to disclose network information that is relevant to the provision of IP-enabled services and the design and development of related equipment in a timely manner. In addition, the Commission should consider restricting the ability of ILECs to bundle customer premises equipment ("CPE") with their IP-enabled service offerings for a transition period. IP CPE manufacturers and their channel partners are playing key roles in driving innovation in IP-enabled services and applications. A restriction on ILEC bundling of CPE and IP-enabled services would help ensure the survival of a competitive base of IP CPE manufacturers and channel partners.

Finally, the Commission should promote open systems principles for IP-enabled 911 solutions. Regulatory policies affecting enterprise telecommunications systems should take into account the complex realities involved in implementing E911 solutions in a highly diverse and decentralized telecommunications environment. Different 911 regulatory approaches may be appropriate for IP-enabled systems and services than for legacy communications. Administratively practical VoIP 911 solutions must be available to enterprise sales channels and their customers.

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The Enterprise Communications Association (“ECA”), by and through its attorneys, hereby submits these Comments on the Commission’s Notice of Proposed Rulemaking (“*NPRM*”) in the above-referenced proceeding.¹

The ECA is the leading trade association promoting the growth of markets and effective sales channels for converged communications solutions deployed by enterprise businesses. ECA brings together a diverse membership base including manufacturers, distributors, network service providers, sales channel companies, systems integrators, applications developers, and consultants. ECA and its members are working toward helping the enterprise marketplace reach the promise of truly converged voice, video and data networks/solutions. ECA is dedicated to demonstrating to customers, to distributors, and to policymakers the business and social benefits delivered by the IP-enabled and other emerging technologies of ECA member companies. As such, ECA is uniquely positioned to provide comments on the matters to be addressed in this proceeding.

¹ *In re IP-Enabled Services*, Notice of Proposed Rulemaking, FCC 04-28, rel. Mar.10, 2004 (“*NPRM*”).

In this proceeding, the Commission is poised to make fundamental decisions that will profoundly affect the future of the enterprise communications industry. The Commission is asking whether – and if so how – it should regulate voice over Internet Protocol ("VoIP") and other Internet Protocol ("IP") -enabled services in areas ranging from public safety to competitive network access. As the Commission recognizes in the *NPRM*, IP-enabled services hold great promise for the public, as developments in IP-based communications services are expected to reduce costs, spur innovation, increase economic productivity and growth, and bolster network redundancy and resiliency. Thus, the stated goal of the Commission in this proceeding is to facilitate the transition to IP-enabled services by promoting competition and applying discrete regulatory requirements where necessary to fulfill critical policy objectives.

ECA supports the Commission's goals, and agrees that the best way to spur the development and deployment of IP-enabled services in the enterprise market is through competition. However, ECA strongly believes that the Commission must take care in this proceeding to protect effective competition in the provision of IP-enabled services and the development and deployment of related equipment by guarding against anticompetitive market activities. In light of the incumbent local exchange carriers' ("ILECs") control of last-mile bottleneck facilities, the Commission should preserve those regulatory requirements that ensure access to ILEC network facilities, particularly broadband loops, and should expand on those obligations where required. At a minimum, the Commission should require the ILECs to comply with Comparably Efficient Interconnection ("CEI") obligations and network information disclosure requirements for their IP-enabled services. Also, the Commission should consider restricting the ability of the ILECs to bundle CPE with their IP-enabled service offerings for a

transition period. Finally, the Commission should promote open systems principles for IP-enabled 911 solutions.

I. The Primary Focus Of The Commission In This Proceeding Should Be On Ensuring Equal Access to Network Facilities.

In its discussion of whether economic regulation should be applied to IP-enabled services, the Commission touches briefly on the issue of what measures are necessary to ensure access to ILEC bottleneck network facilities.² The Commission asks, in essence, if the various protections that have historically helped guarantee competitive providers and their customers access to the network continue to be necessary in the IP environment. Elsewhere, the Commission poses the same question another way, asking whether any special measures are necessary where “IP-enabled services are offered by companies that also own the underlying transmission facilities,” and whether it should distinguish between dominant and non-dominant providers of such facilities.³

The *NPRM* offers little analysis of the issue of ensuring access for IP services. The Commission notes that there are several pending proceedings where it has proposed reducing or eliminating its rules requiring the ILECs to provide access to their network facilities.⁴ The Commission then poses a series of broad questions about how it should proceed in the IP services context.⁵ While the Commission does not offer any tentative conclusions in the *NPRM*, the tenor of its questions and its statements elsewhere suggest that the Commission may be

² *NPRM* at ¶ 73-74.

³ *NPRM* at ¶ 37.

⁴ *NPRM* at ¶ 73.

⁵ *Id.*

considering lifting some or all of its regulatory requirements designed to ensure equal access to network facilities.⁶

ECA believes that the issue of access to bottleneck facilities deserves substantially more attention than it receives in the *NPRM*. In the long run, this may prove to be among the most critical issues relating to IP services. If IP providers cannot obtain access to the network facilities needed to deliver services to their customers, all of the Commission's efforts to fashion a regulatory environment that otherwise encourages the development of IP services will be moot. While in the long run there may be sufficient alternatives, for the foreseeable future the ability of IP providers to deliver their services will turn to a large extent on access to ILEC facilities. In this regard, the Commission's words of nearly two-and-a-half decades ago in the *Computer II Final Decision*⁷ are no less true today:

The importance of the control of local facilities, as well as their location and number, cannot be overstate[d]. As we evolve into more of an information society, the access/bottleneck nature of the telephone local loop will take on greater significance. Although technological trends suggest that hard-wire access provided by a telephone company will not be the only alternative, its existing ubiquity and the amount of underlying investment suggest that whatever changes do occur will be implemented gradually.⁸

As the ILECs begin the process of transitioning their customer bases to IP networks, the need for open access protections is even greater. Currently, IP providers can in most instances obtain a dedicated circuit from the ILEC in one form or another to reach their customers. As the

⁶ *Id.*; *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, Notice of Proposed Rulemaking, 17 FCC Rcd 3019, ¶¶ 43-53 (2002) (considering eliminating *Computer Inquiry* requirements); *Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services*, Notice of Proposed Rulemaking, 16 FCC Rcd 22745, ¶¶ 38-48 (2001) (considering treating ILEC broadband offerings as non-dominant and not subject to the *Computer Inquiry* protections) ("*ILEC Broadband Notice*").

⁷ *Amendment of Section 64.702 of the Commissions Rules and Regulations (Second Computer Inquiry)*, Final Decision, 77 F.C.C.2d 386, ¶ 219 (1980).

⁸ *Id.* at ¶ 219.

ILECs move their own traffic off the PSTN and onto their own IP networks, issues of access and interconnection are likely to become much more complicated.

Whatever approach the Commission ultimately adopts to the regulation of IP services, it must act to ensure vigorous competition. ECA strongly urges the Commission to maintain—and indeed to expand where necessary—the regulatory protections ensuring access to ILEC facilities in general, and broadband local loops in particular.

The Commission has long recognized the need to ensure competitive providers access to the bottleneck communications facilities, including most notably the ILECs' local loops. Indeed, there was a certain prescience to the *Computer Inquiries*. By separating the transmission and enhanced services components of the network, the Commission anticipated and helped give rise to the notion of the layered network with distinct physical, logical, application, and content strata. Moreover, the Commission correctly foresaw that "[t]he underlying carrier's transmission facilities become the basic building block upon which computer facilities can be added to perform myriad combinations and permutations of processing activities."⁹ And, by separating the basic transmission from the services riding over the basic transmission, the Commission essentially gave birth to the view of the network as an open platform:

The isolation of the transmission component enables any carrier to provide an enhanced . . . service on the same basis, without threat of unfair competitive advantage accruing to a given carrier by virtue of its control over the underlying transmission facilities. The transmission facility would be common to all entities and removed as a competitive element of the service.¹⁰

The Commission now poses the question whether, with the advent of IP-enabled services it can and should do away with those protections. The answer is no. If anything, the protections

⁹ *Amendment of Section 64.702 of the Commission's Rules and Regulations (Second Computer Inquiry)*, Tentative Decision and Further Notice of Inquiry and Rulemaking, 72 F.C.C.2d 358, ¶ 75 (1979) ("*Computer II Tentative Decision*").

¹⁰ *Computer II Tentative Decision* at ¶ 73.

developed by the Commission over the last three decades are even more critical now. In an IP environment, unlike the legacy circuit-switched network, the separation of services and applications on the one hand and the underlying physical network on the other hand is essentially complete. As the Commission recognizes, "enhanced functionalities delivered via the PSTN typically must be created internally by the network operator and are often tied to a physical termination point."¹¹ By contrast, "IP-enabled services can be created by users or third parties, providing innumerable opportunities for innovative offerings competing with one another," all riding over, but distinct from, the same physical network.¹² Without access to the underlying network facilities, the innovation and efficiencies that result from the separation of the physical network from the services provided over the network will not be realized.

The Commission has suggested recently that, with the growth of competition from cable company and other last-mile broadband providers, there is less need for the regulatory requirements designed to ensure access to ILEC facilities.¹³ That view, however, both ignores the reality of the current state of alternative facilities deployment and, more importantly, is not consistent with the open platform approach to the network that is critical for the continued growth of IP services.

The simple fact is that the ILECs remain the dominant provider of access facilities in most markets. While the cable companies have recently made significant inroads into the residential broadband market, there has been relatively little penetration of the enterprise marketplace. And even where cable companies have deployed facilities, it does not necessarily mean that independent IP services have an available alternative to ILEC facilities. Cable

¹¹ *NPRM* at ¶ 4.

¹² *Id.*

¹³ *ILEC Broadband Notice* at ¶¶ 29-31.

companies are not required to provide access to their networks to independent IP providers. A cable company could deny its customers access to competitive VoIP service providers to ensure that end-users purchasing broadband cable facilities will use the cable company's VoIP service. As for the other emerging access technologies—broadband over power line, free space optics, Wi-Max, and others—while some or all may prove in the future to be viable alternatives on a large scale, at the present deployment is very limited.

Thus, for the foreseeable future, most communications—whether IP or circuit-switched—will, at least for the last mile, be carried over the ILECs' facilities. In deciding whether and how to regulate IP services, the Commission must understand that access to ILEC bottleneck facilities, including, most critically, broadband loops, is a critical component of the success of the next generation of IP-enabled services.

In any case, even if there were one or two ubiquitously available alternatives to the ILECs' facilities, it would not obviate the need to ensure open access to these networks. As discussed above, one of the key differentiations between IP-enabled services and legacy PSTN services is that in the IP environment, services and content are separate from the underlying network. That separation in turn allows an essentially limitless number of providers to compete to bring innovative "offerings which are designed not to fit within the limitations of a legacy network but rather to provide each end user a highly customized, low-cost suite of services . . ." ¹⁴ In a competitive landscape where competition is limited to two or three closed network providers, the greatly expanded opportunities for innovation afforded by separating the network and the services that ride over it are lost. In the end, two gatekeepers controlling access to customers is not much of an improvement over a single gatekeeper.

¹⁴ *NPRM* at ¶ 5.

Thus, the answer to the question posed by the Commission in paragraph 37 of the *NPRM*—should it regulate IP-services providers "that own the underlying transmission facilities" differently than those that do not—is an emphatic yes. Regardless of how, and to what extent, the Commission chooses to regulate retail IP-enabled services, it must ensure that all providers have access to the underlying enabling facilities.

II. The Commission Should Impose Certain Regulatory Requirements On ILECs To Minimize The Potential For Anticompetitive Behavior In The Market For IP-Enabled Equipment And Services And To Level The Playing Field For Competitive Providers.

The market for telecommunications services is evolving toward a convergent, "one-stop shopping" environment. Consumers increasingly want to purchase all of their telecommunications and related equipment and services from the same entity. More than ever, ILECs can bundle IP-enabled services with other equipment and service offerings in a way and at a price that no competitor can match, due to their relationships with affiliated companies, and their control of the operation and pricing of last-mile facilities that competing service providers must use to reach their customers. ILECs' local wireline, broadband, and wireless customer bases, combined with their IP-enabled service platforms and associated facilities, can and will be used to create bundled service and equipment offerings beyond the reach of competitive providers if last-mile access is restricted. Indeed, industry analysts are already predicting the difficulties that companies not affiliated with cable operators and ILECs (*e.g.*, Vonage) will have competing in the IP-enabled services market as a result of the ability of cable operators and ILECs to bundle VoIP with other offerings.¹⁵

¹⁵ See Jonathan Krim, "Will Providers Provide Equally?", *THE WASHINGTON POST*, May 27, 2004, Section E, at 1, 6.

Control of last-mile facilities also gives ILECs and cable companies a significant ability to engage in anticompetitive behavior in the market for IP-enabled equipment and services. ILECs and cable companies can use their control of their networks to place their IP-enabled service provider competitors at a distinct disadvantage, by making it more difficult or costly for these competitors to provide service, or by preventing them from providing service altogether. As an example, the technology already exists to enable network operators to recognize the data packets that move across their systems and to prioritize them. ILECs and cable companies could block or assign a lower priority to packets from competing IP-enabled service providers, such as VoIP service providers. Such action would prevent these competitors from providing service to their customers at the quality level committed, or from providing service altogether.

Similarly, ILECs and cable companies could place manufacturers of customer-owned systems and competing IP-enabled service providers at a disadvantage by withholding information on changes to their underlying network configurations, or by forcing interconnecting IP-enabled service providers to use outdated network interfaces. For example, Qwest recently announced with great fanfare that it would provide an open network platform for "true VoIP" service providers to "help accelerate the deployment and delivery of VoIP to customers across the U.S."¹⁶ However, the interface Qwest adopted for this platform is TDM, not IP – thereby forcing VoIP service providers to use older, inefficient, and more expensive equipment in providing service to their customers.

The negative impact of actions such as these cascades through the industry. The failure of ILECs and cable companies to make information on changes to their networks readily

¹⁶ *"Qwest Announces New Policy Eliminating Access Charges For True VoIP Calls And Availability Of New Local Services To VoIP Providers,"* Qwest press release, Apr. 26, 2004, available at http://www.qwest.com/about/media/pressroom/1,1720,1512_archive,00.html.

available makes it more difficult and costly for equipment manufacturers to design products that make optimal use of network technologies and to make state-of-the-art equipment available in a timely fashion to competing service providers. An ILEC's insistence that competing IP-enabled service providers use outdated interfaces makes it difficult for manufacturers and applications developers to design IP-enabled solutions that will add value to all networks.

Of course, the customer is the ultimate loser if the ILECs and cable companies are allowed to engage in anticompetitive behavior. If it is more difficult or expensive for equipment manufacturers or competitive service providers to design or deploy state-of-the-art equipment or services, customers will pay more for services and equipment and receive less value for their money.

A. The Commission Should Impose CEI Obligations on ILECs In Their Provision of IP-Enabled Services.

In light of ILEC and cable company control of bottleneck facilities, the Commission must adopt safeguards to preserve competition in the provision of IP-enabled services. At a minimum, ILECs should be required to adopt CEI plans for IP-enabled services, and thus explain how they will offer to competitive IP-enabled service providers, on a non-discriminatory basis, all the underlying facilities that the ILECs use to provide their own IP-enabled service offerings. ILECs should be required to adopt CEI plans for all IP-enabled services, regardless of the regulatory classification (*i.e.*, telecommunications service or information service) assigned to a specific service.

The ILECs' CEI plans should be required to address all nine (9) parameters¹⁷ that the ILECs are presently required to address in their CEI plans for other telecommunications services, most notably interface functionality and technical characteristics. In particular, ILECs should be required to provide competing IP-enabled service providers with an IP processing and routing platform that is comparable to the platform the ILECs employ in providing their own IP-enabled services. Interface standards must be open, non-proprietary, and non-discriminatory.

As with all other CEI plans, the ILEC should be required to post their plans for IP-enabled services on their public web sites and notify the Commission at the time of posting. While the Commission's current rules allow the ILECs to initiate service at the same time that the related CEI plan is posted to the ILEC's web site, ECA recommends that the ILECs be

¹⁷ The nine parameters are:

- (1) interface functionality, which requires the ILEC to make standardized hardware and software interfaces available to competitors that are the same as those utilized by the ILEC in providing its enhanced services;
- (2) unbundling of basic services, which requires BOCs to unbundle basic services and functions which underlie its enhanced service offerings;
- (3) resale, which ensures that both the ILEC and the competing service provider pay the same amount for underlying telecommunications services provided by the ILEC;
- (4) technical characteristics, which requires the ILEC to provide basic services with technical characteristics equal to the technical characteristics the ILEC uses for its own enhanced services;
- (5) installation, maintenance and repair, which requires the ILEC to provide the same time periods for installation, maintenance, and repair of the basic services and facilities included in a CEI offering as those the ILEC provides to its own enhanced service operations;
- (6) end user access, which requires equal access to special network functions;
- (7) CEI availability, which requires the ILEC to make its CEI offering available and fully operational on the date it offers the corresponding enhanced service to the public;
- (8) minimization of transport costs, which requires the ILEC to provide competitors with interconnection facilities that minimize transport costs; and
- (9) availability to all interested ISPs, which prohibits the ILEC from restricting the availability of a CEI offering to a particular class of customer or competitor.

See Computer III Further Remand Proceedings, 14 FCC Rcd 4289 (1999), ¶ 13 (“*Computer III Remand Order*”).

required to delay their initiation of service until 30 days after posting for IP-enabled services. Providing a short period for reaction is appropriate in this case in light of the rapid introduction of new IP technologies.

The imposition of CEI obligations on ILECs with respect to IP-enabled services is entirely consistent with the Commission's goals in this proceeding and the means intended by the Commission to achieve those goals. The Commission has repeatedly found that CEI plans promote competition, by giving competitors information on the access they need to provide their own service offerings, and by helping the Commission to enforce compliance with interconnection obligations.¹⁸ Moreover, the Commission has recognized that CEI obligations as they currently exist are not unduly burdensome for ILECs.¹⁹ As such, CEI obligations will not prevent or unduly restrict the ILECs and cable companies from competing in the market for IP-enabled services, but rather will help to level the playing field for alternative service providers.

B. The Commission Should Require ILECs To Disclose Network Information That Is Relevant To The Provision of IP-Enabled Services And The Design And Development Of Related Equipment In A Timely Manner.

The safeguards that the Commission adopts in this proceeding to preserve competition in the provision of IP-enabled services should also include network information disclosure requirements. Section 251(c)(5) of the Communications Act of 1934, as amended,²⁰ and the Commission's rules promulgated thereunder already require ILECs to provide public notice of network changes. Section 251(c)(5) requires notice when an ILEC makes a decision to implement a change that affects competing service providers' performance or ability to provide service, or otherwise affects the ability of the ILEC's and the competing service provider's

¹⁸ See, e.g., *Computer III Remand Order* at ¶¶ 11, 15.

¹⁹ *Id.* at ¶ 19.

²⁰ 47 U.S.C. § 251(c)(5).

facilities or network to connect, exchange information, or use the information exchanged.²¹

Extending these requirements to include network information that is necessary for alternative IP-enabled service providers to use the ILEC network would promote competition, as it would ensure that competing IP-enabled service providers have timely access to the information they need to provide service, and that equipment manufacturers have timely access to the information they need to design and develop related equipment. The Commission has previously recognized that timely access to information is an effective tool in preventing anticompetitive behavior.²²

C. The Commission Should Consider Restricting The Ability Of The ILECs to Bundle CPE With Their IP-Enabled Service Offerings For A Transition Period.

Finally, with regard to customer premises equipment ("CPE"), ECA urges the Commission to re-examine its 2001 decision permitting ILECs to bundle CPE with their service offerings.²³ While the Commission's decision may have appeared reasonable at the time and in the context in which it was made -- the bundling of CPE with basic local services -- it makes much less sense as applied to emerging IP services. By 2001, the traditional CPE industry had matured, equipment had standardized, and prices had dropped sufficiently for the Commission to find that CPE had become "commoditized."²⁴ By contrast, IP-enabled CPE is still in a formative period, characterized by innovation, as well as a feedback relationship with IP services and applications in which the development of new CPE drives the deployment of new services and applications (and vice versa).

²¹ *Wireline Competition Bureau Network Change Notification Filed By BellSouth*, Order, 19 FCC Rcd 42 (2004), at ¶ 2.

²² *See Computer III Remand Order* at ¶ 38.

²³ *See Policy and Rules Concerning the Interstate, Interexchange Marketplace, Report and Order*, 16 FCC Rcd 7418 (2001).

²⁴ *Id.* at ¶ 21.

In the current environment, IP CPE manufacturers and their channel partners are playing key roles in driving innovation in IP-enabled services and applications. If the ILECs are able to leverage their market power and network offering capabilities to package IP CPE at prices below competitive levels, the result will be a stifling of competition and of the innovation it drives. CPE manufacturers, of course, do not have the ability to cross-subsidize like ILECs do. Just as was the case during the transition to an unregulated CPE market, during the transition from the TDM to IP environment, the Commission should ensure the survival of a competitive base of manufacturers and their channel partners. As the Commission knows, there has already been a shake-out in the CPE industry over the last few years during the transition to VoIP, and it would be harmful to competition if other CPE manufacturers abandon the marketplace as a result of unfair competition and an uneven playing field.

III. The Commission Should Promote Open Systems Principles For IP-Enabled 911 Solutions.

ECA's main interest in the area of E911 is to ensure that regulatory policies affecting enterprise telecommunications systems take account of the complex realities involved in implementing E911 solutions in that highly diverse and decentralized telecommunications environment. Currently the telecommunications systems operated by enterprises are in transition between "legacy" circuit-switched systems (*e.g.*, key systems, hybrids, and PBXs) and new packet-switching technology that is used for an ever-increasing share of enterprises' communications needs. Regulating during this transition may require the Commission to adopt different regulatory rules and policies for "legacy" and VoIP-based systems.

A. Different 911 Regulatory Approaches May Be Appropriate For IP-Enabled Systems and Services Than For Legacy Communications.

Manufacturers have already developed technical solutions for 911 communications for use with legacy systems. There is relatively little that the Commission can do to accelerate compliance by legacy systems at this stage. Given that legacy systems are likely a declining technology, the Commission's wisest course at this point is probably to avoid introducing new regulation of manufacturers and end users of legacy systems.²⁵

In the case of VoIP-based systems, the Commission may need to adopt a more active regulatory role in order to (1) ensure that carrier practices do not obstruct competition and technical innovation in VoIP communications; (2) promote standards that enable the use of VoIP capabilities to improve 911 communications; and (3) head off potentially restrictive state regulation.

Because VoIP technology is just emerging from infancy, there is significant potential for the providers of local facilities to implement proprietary protocols, engage in preferential routing of 911 calls, or employ discriminatory data screening practices that favor their own VoIP systems and services over those of competitors. The potential for such preferential and discriminatory practices exists in VoIP communications generally, as discussed above; the consequences of such practices would be especially harmful – not only to competition, but to the public safety, health and welfare – if they are allowed to be pursued in the area of emergency communications.

²⁵ The Commission should, however, amend its rules to ensure that local exchange networks continue to support the 911 requirements of legacy systems. Implementation of 911 requirements is difficult enough when appropriate network facilities are available; it is a nightmare when they are not available or are only available in non-standard form. The Commission should amend Part 64 of the rules to require LECs to ensure that their 911 transmission facilities conform to current industry standards for CAMA and ISDN technologies that support enhanced 911.

The Commission may also need to engage in standards promotion for IP-enabled 911 communications. While standards are best developed by the private sector, the Commission could play a significant role in ensuring that standards are based on “open systems” principles.

The Commission should also be alert to the potential for inconsistent or unnecessarily restrictive state regulation that threatens to constrict the industry’s ability to improve VoIP technology and its application to the 911 problem.

B. Administratively Practical VoIP 911 Solutions Must Be Available To Enterprise Sales Channels And Their Customers.

Experience has demonstrated that, in considering regulations to enhance 911 capabilities, regulators must be careful to consider how such capabilities will actually be implemented, especially if responsibility for implementation will fall primarily on end users and vendors marketing to end users. Elegant technical solutions to the 911 problems, which might work perfectly if they could still be implemented by a single entity such as the old Bell System, may turn out to be utterly impractical in today’s communications world, where hundreds of equipment and software companies provide premises-based telecommunications systems to millions of businesses, each of whom must take individual responsibility for operating its own telecommunications system.

In this respect, the business communications market presents a very different challenge than does the cellular telecommunications market, where a relatively small number of very large wireless carriers effectively determine the equipment and services available to most users and can largely implement 911 technical solutions on their own. In the multiline telephone systems market, by contrast, successful deployment of 911 technical solutions typically has required significant contributions on the part of four separate industry groups (in addition to PSAPs):

local exchange carriers, equipment manufacturers, system retailers, and end users, with implementation responsibility ultimately resting on end users.²⁶ Neither the Commission nor state governments can craft successful 911 technical solutions without realistically evaluating the roles and burdens that each of these groups reasonably can be expected to assume.

Ensuring that VoIP technology is most effectively used to benefit 911 communications will require the Commission to walk a fine line between restrained, competition- and standards-promoting regulation and restrictive over-regulation that stifles innovation in VoIP and enterprise systems. ECA is prepared to assist the Commission in developing an effective 911-VoIP policy that strikes the appropriate balance.

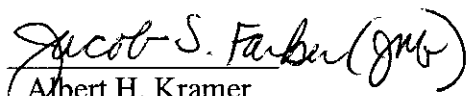
²⁶ At the Commission's recent "Solutions Summit" on VoIP and 911, the Commission obtained a great deal of valuable input from a variety of public and private sector representatives. Two key groups, however, were not represented at the summit: system retailers and business end users. Future forums on the 911 issue should include representatives of these groups.


IV. Conclusion

As the Commission observes in the *NPRM*, the changes wrought by the rise of IP-enabled communications services promise to be revolutionary.²⁷ Thus, the Commission's task in determining the appropriate regulatory scheme for IP-enabled services is critical. Following the guidance provided by ECA in these Comments will better ensure that the scheme adopted serves the public interest.

Respectfully submitted,

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²⁷ *NPRM* at ¶ 5.